ON PAGE A1
NEW YORK TIMES
10 February 1986

U.S. to Curb Supercomputer Use By Soviet Scholars Working Here

STAT STAT

By DAVID E. SANGER

Tight restrictions will be placed on Soviet bloc scholars' access to supercomputers in the United States, according to National Science Foundation officials and university officials, who have reluctantly agreed to the move.

The action came at the insistence of the Defense Department and the nation's intelligence agencies. An agreement in principle on the restrictions, which has not been announced, was reached late last month after seven month of debate between national security officials and the foundation, a Federal agency, which represented the universities.

United States military officials contend that Soviet military specialists posing as scholars could make use of supercomputers, which work at high speeds and constitute the world's most powerful computer equipment, to design weapons or break codes.

They Still Seek Exceptions

As part of a broad battle against leaking of high technology to the Soviet bloc, the Reagan Administration has been attempting to persuade allies of the United States to impose similar restrictions abroad.

University officials familiar with negotiations on the issue say they are still seeking exceptions from a blanket ban, and it is not clear that faculties will accept the Government's plan. In the latest battle with the Administration over academic freedom issues, university officials had argued that Government efforts to block specific types of work by foreign scholars would set a dangerous precedent.

"Obviously, there are some real national security concerns here," said Robert M. Rosenzweig, the president of the Association of American Universities. "But if we put a lid on scientific inquiry, there are other risks as well, risks to the openness of academia." Nevertheless, he said the Government's plan would probably prove acceptable.

In the past, the Pentagon and State Department have periodically restricted the activities of individual foreigners visiting American universities. But the Government has not set a broad rule restricting foreign access to nonsecret research or equipment, in this case by placing standard restrictions on the visiting scholars' visas.

Who Is to Do the Policing

University administrators familiar with the Government plan say the use of visa restrictions could solve one of their key concerns: Making sure Government agents, not the universities, are responsible for enforcing the ban. "No one wants the universities to have to play a policeman's role," said Charles Herz, general counsel for the National Science Foundation.

But Mr. Herz said foundation officials were attempting to establish a special appeals process for foreign scholars with specific projects that hinge on supercomputers. They are also seeking an exception for students using the machines as part of their ordinary classwork, though not for doctoral students working independently on dissertations. Military officials, saying the United States should establish airtight rules that will be an example to its allies, generally oppose exceptions.

The question of exceptions is being negotiated by officials from the National Science Foundation, the Commerce, State and Defense Departments and the intelligence agencies.

"There is still disagreement within the Government over how to handle these matters," said Mr. Herz, "But the basic principle is set: no access to supercomputers for scholars from the Soviet bloc."

They Work on Difficult Ones

At the center of the controversy are the 170 supercomputers around the world. The machines, which cost $10 million to $30 million each, work on some of the toughest problems in aerodynamics, nuclear physics, cryptography, biotechnology and a wide range of academic pursuits.

Until recently, most had been in private or Government hands. The largest collection of the supercomputers is said to be held by the National Security Agency, which monitors voice and data tranmissions around the world and breaks codes for American intelligence agencies. More than a half dozen are at the Lawrence Livermore National Laboratory, where nuclear weapons are designed. Most of major automobile and aircraft manufacturers, along with several military contractors and oil companies, own at least one.

Last year, however, the National Science Foundation aanounced $200 million program to create four supercomputer centers on campuses, making the technology widely available to basic researchers for the first time. The four campuses are Princeton, the University of Illinois, Cornell and the University of California at San Diego. A fifth center has recently been added to the program, at Carnegie Mellon University in Pittsburgh, and a handful of universities are buying supercomputers on their own.

Even before installation of those computers began,, however, national security officials began to express fears that Soviet bloc scholars would process some of their military's toughest problems on the machines. Already, according to one report, Soviet scientists have made private advances to American colleagues to develop, among other things, a computer model of the atmospheric disaster called "nuclear winter," which many scientists theorize would follow a major nuclear exchange.

'It Doesn't Make Sense,' He Says

"It simply doesn't make sense to allow foreign nationals access here to militarily sensitive machines that we won't export to their home country," Stephen D. Bryen, the deputy assistant Secretary of Defense for international economic, trade and security policy said last summer.

Intelligence sources say they believe the Soviet Union has no supercomputers, which are subject to tight export controls. But with two Japanese manufacturers beginning to compete with the two American manufacturers, Cray Research and Control Data Corporation, those controls will become harder to enforce, they contend.

The issue of access to campus computers, academic officials say, has placed the universities and the National Science Foundation in a quandary. On the one hand, they say the national security threat, while limited, is probably a genuine concern. On the other hand, scientists have resisted what they call a pattern of actions by the Reagan Administration to clamp down on nonsecret but sensitive research, including the publication of academic papers.

"The reason this has turned into such an issue," said one Federal official whc spoke on condition of not being identified, "is that the university people see a subtler and deeper threat. They have the instinctive feeling that they are being asked to be the pawns of the Government, the policemen of high technology. And they are right when they say that's not their role."

Continued